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DEPARTMENT OF THE AIR FORCE
Air and Space Basic Course (AETC)
Maxwell Air Force Base, Alabama 36112

LESSON PLAN

A2130-PHYSICAL READINESS TRAINING (PRT)

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RECORD OF CHANGES

CHANGE NUMBER	REMARKS
New Lesson Plan	

SUMMARY OF CHANGE

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EDUCATIONAL GOALS

A2000 Area Objective: Apply leadership skills to influence and direct people and resources to accomplish the mission.

A2100 Phase Objective: Apply personal wellness skills.

A2130- PHYSICAL READINESS TRAINING (PRT)

Lesson Objective 1: Demonstrate teambuilding and personal wellness skills in a physical activity.

Sample of Behavior:

(F) 1.1 – Use appropriate personal wellness skills taught throughout the ASBC experience.

Lesson Description: This period of instruction consists of 60 exercises done over the course of a 2 to 3 day period. Each day's instruction will be approximately 1 hour long. Students will accomplish 3 different phases, a Preparation phase, an Activity phase, and a Recovery phase.

Prerequisites:

Lesson A2210 - Fundamentals of Teambuilding
Lesson A2120 - Healthy Warrior

Preparation:

Complete warm-up exercises as part of the lesson

Optional: N/A

Rationale/Linkage: This lesson is aimed at helping the students to develop and maintain a high level of physical readiness and understanding how that commitment is part of the profession of arms.

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INSTRUCTIONAL PLAN

1. TITLE AND LENGTH OF LESSON: Physical Readiness Training (PRT) (1:00)

2. RELATION TO OTHER INSTRUCTION: This exercise is the students' opportunity to demonstrate skills that will help build an effective and efficient team, one that maximizes its resources, skills taught in A2210-Fundamentals of Teambuilding and Problem Solving. It also will give them techniques to help achieve personal wellness.

3. GENERAL METHOD OF INSTRUCTION:

a. Presentation Method: Outdoor Exercise

b. Time Outline:

Segment Time	Total Time	Description
0:15	(0:15)	Prep Phase
0:30	(0:45)	Activity Phase
0:15	(1:00)	Recovery Phase

c. Instructor Preparation

- Review exercises

d. Instructor Aids/Handouts

- A2110-Healthy Warrior Lesson Plan
- A2210-Fundamentals of Teambuilding and Problem Solving Lesson Plan

e. Student Preparation

- Review PRT video
- Review PRT/Obstacle Course Binder

- Show at the scheduled time
- f. Strategy:** The PRT will be conducted in 3 phases. In phase one, the “Preparation phase”, the students will do warm-up exercises that will prepare them for the next phase. In the second phase, the “Activity phase”, each squadron will do a combination of strength and running exercises. The third phase is the “Recovery phase” and will consist of cool down exercises. The PRT will be lead by designated Flight Commanders and may have fitness experts who will be available to coordinate all training and assist with certain exercises to ensure quality execution.

DETAILS OF INSTRUCTION

{Instructor notes:

- *Check the schedule to see what time the students have to show up for the PRT session*
- *Inform the students that they may want to get out to the volleyball courts early and stretch out on their own (during the PRT warm-ups they will not be doing static stretching)*
- *Remind the students that they have to be lined up and ready to go at the time on the schedule*
- *Remind the students how to line up}*

a. Preparation Phase 0:15 (0:15)

- Ensure the students pay attention and do the exercises correctly (during the first 3 workouts, the students will go through familiarization and orientation)
- Stay alert for safety issues

b. Activity Phase 0:30 (0:45)

- If your squadron is to transition to another area, ensure they do in an orderly and timely manner (two squadrons will stay on the volleyball courts and two squadrons will transition to do other activities)
- Stay alert for safety issues and always stress that the students should stay hydrated and within their own personal limitations

c. Recovery Phase 0:15 (1:00)

- For the squadrons who transitioned away from the volleyball courts, on the horn, transition back to the volleyball courts for the Recovery phase

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▪ Calisthenic Drills

The term calisthenics originates from the Greek “kalos sthenos”, meaning beautiful strength. Calisthenics are precise exercise movements and postures that provide the foundation for developing the body to its fullest performance potential. Calisthenics have a long history of service to the military. LTC Herman J. Koehler, Master of the Sword at the U.S. Military Academy from 1885-1923, was the first to systematically apply calisthenics to student training. Deriving much of his program from European models of physical culture, where strong, graceful movement was a valued end state, as well as a means to martial readiness, Koehler laid the basis for all military calisthenics to follow. Calisthenics are the centerpiece of the physical readiness training (PRT) system because they offer the following benefits:

- **Utility:** Calisthenics allow the PRT leader and assistant instructors to train a large number of people in a time-efficient manner. In addition, no other PRT activity develops all three components of readiness to such an equal degree. Calisthenics build strength by challenging control of body weight. They promote endurance without the repetitive motions that often lead to overuse injuries. They improve mobility by progressively moving the major joints through a full, controlled range of motion.
- **Versatility:** The calisthenic drills serve not only as preparation for all PRT activities, but also as a primary PRT activity. Calisthenic Drill 1, combined with Guerrilla Drill 1, prepares the body for any challenge to follow. Performing multiple sets of Calisthenic Drill 1, or combining it with other PRT activities, creates a training effect that promotes strength, endurance, and mobility.
- **Performance Oriented Training:** Air Force members must be proficient in the basic skills required to perform their duties. Calisthenics incorporate functional movements that prepare students to accomplish physically challenging tasks. The calisthenic drills develop the ability to squat, reach, twist, lunge, jump, land, push, and get up and down. These are the type of movements demanded of student negotiating obstacles, uploading for deployment, and getting in and out of vehicles, etc.
- **Discipline:** As with all PRT drills performed to cadence, calisthenics demand attention to detail. Placing students in formation and performing the exercises to a specific cadence allows the PRT leader to observe all students.
- **Body Management:** This benefit of calisthenics is closely tied to disciplined execution. When students are held accountable for the execution of each exercise, they gradually become aware of the component actions that must blend smoothly into a complex act such as a lunge and reach. By watching the skillful execution of the PRT leader and hearing the rhythm of the cadence, they gradually develop a sense of timing and grace.

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- **Effect of the Mass:** A formation of students bellowing the number of repetitions, with their movements and voices in unison, is an impressive display when viewed both within and outside the formation. It conveys physical readiness, discipline, and spirit - essential attributes of the air force warrior.

Calisthenic Drill 1; Exercise 1

The Bend and Reach

Purpose: This exercise develops the ability to squat and reach through the legs. It is a lead-up exercise for the shoulder roll. It also serves to prepare the back and extremities for more vigorous movements. From a flexibility perspective, it takes the hips and back through full flexion.

Starting Position: Straddle Stance with arms overhead.

Cadence: Slow.

Count:

1. Squat with the heels flat as the back rounds forward to allow the straight arms to reach as far as possible between the legs.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ From the starting position, ensure that students have their hips set, their abdominals tight, and their arms extended fully overhead, shoulder width apart with palms facing one another, fingers and thumbs extended and joined.
- ☐ On counts one and three, the neck flexes to allow the student to look to the rear. This brings the head in line with the bend of the trunk.
- ☐ The heels remain flat throughout the exercise.
- ☐ On counts two and four, do not allow the trunk to bend backward past the starting position.

Precautions: To protect the back, this exercise will always be performed at a slow cadence. Move into the count one position in a slow, controlled manner. Do not bounce into or out of this position in a ballistic manner, as this may place an excessive load on the back. Performing this exercise immediately after an intense activity can cause light-headedness.

Calisthenic Drill 1; Exercise 2

The Rear Lunge and Reach

Purpose: This exercise develops balance, opens up the hip and trunk on the side of the lunge and develops leg strength.

Starting Position: Straddle Stance with hands on hips.

Cadence: Slow.

Count:

1. Take an exaggerated step backward with the left leg, touching down with the ball of the foot while raising both arms fully overhead.
2. Return to the starting position.
3. Repeat count one with the right leg.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ Maintain straightness of the back by keeping the abdominal muscles tight throughout the motion.
- ☐ Reach fully overhead with both arms. Arms should be shoulder width apart with palms facing one another with the fingers and thumb extended and joined.
- ☐ After the foot touches down on counts one and three, allow the body to continue to lower. This promotes a better opening of the hip and trunk. The rear leg is straight, not locked.
- ☐ Lunge and step in a straight line, keeping the feet directed forward. Viewed from the front, the feet are shoulder width apart, both at the starting position, and at the end of counts one and three.
- ☐ Keep the forward knee over the ball of the foot on counts one and three.

Precautions: This exercise will always be performed at a slow cadence. On counts one and three, move into position in a slow, controlled manner. If the cadence is too fast, it will be difficult to go through a full range of motion.

Calisthenic Drill 1; Exercise 3

The High Jumper

Purpose: This exercise reinforces correct jumping and landing form, develops balance and coordination, and explosive strength.

Starting Position: Forward Leaning Stance.

Cadence: Moderate/Fast.

Count:

1. Jump a few inches and simultaneously swing the arms forward to parallel with the ground.
2. Swing the arms backward and jump a few inches.
3. Swing arms forward and vigorously overhead while jumping forcefully upward.
4. Repeat count two. On the last repetition, return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ❑ At the starting position, the shoulders, the knees, and the balls of the feet should form a straight vertical line.
- ❑ On count one, the arms are shoulder width apart, palms facing one another, fingers and thumbs extended and joined. On count three, the arms should be extended fully overhead, shoulder width apart with palms facing one another, fingers and thumbs extended and joined.
- ❑ On each landing, the feet should be directed forward and no more than shoulder distance apart. The landing should be “soft” and proceed from the balls of the feet to the heels. The vertical line from the shoulders through the knees to the balls of the feet should be achieved on each landing.

Precautions: Don't exaggerate count three on the first few repetitions; gradually progress to higher jumps.

Calisthenic Drill 1; Exercise 4

The Rower

Purpose: This exercise improves the ability to move in and out of the supine position to a seated posture. It coordinates the action of the trunk and extremities while offering a strong challenge to the abdominal muscles.

Starting Position: Supine Position, arms overhead, feet together and pointing upward. The chin is tucked and the head is 1-2 inches above the ground.

Cadence: Slow/Moderate.

Count:

1. Sit up while swinging arms forward and bending at the hip and knees. At the end of the motion, arms will be parallel to ground, palms facing inward.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ❑ At the starting position, the low back must not be arched excessively off the ground. To prevent this, tighten the abdominal muscles to tilt the pelvis and low back toward the ground.
- ❑ At the end of count one, the feet are flat and pulled near the buttocks. The legs stay together throughout the exercise.

Precautions: Students that arch their back during this exercise risk trunk injury. If this exercise is performed too fast, it will be difficult to achieve full range of motion.

Calisthenic Drill 1; Exercise 5

The Power Squat

Purpose: This exercise reinforces proper lifting form while developing strength of the back and lower extremities.

Starting Position: Straddle Stance with hands on hips.

Cadence: Slow/Moderate.

Count:

1. Squat while raising the arms to parallel with the ground, palms facing inward.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ At the end of counts one and three, the thighs should be aligned parallel to the ground and the back is straight
- ☐ The heels remain on the ground throughout the exercise.
- ☐ On counts one and three, arms are parallel to the ground, shoulder width apart with palms facing one another, fingers and thumbs extended and joined.

Precautions: Allowing the knees to go in front of the toes on counts one and three will increase stress to the knees.

Calisthenic Drill 1; Exercise 6

The Windmill

Purpose: This exercise develops the ability to safely bend and rotate the trunk. It challenges the muscles of the trunk, legs, and shoulders.

Starting Position: Straddle Stance with arms sideward, palms down.

Cadence: Slow/Moderate.

Count:

1. Bend the hips and knees while rotating to the left. Reach toward the outside of the left foot with the right hand. The left arm is pulled rearward to maintain a straight line with the right arm.
2. Return to the starting position.
3. Repeat count one to the right.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ From the starting position, feet are straight ahead, arms parallel to the ground, hips set, and abdominals tight.
- ☐ On counts one and three, ensure that the knees bend during the rotation. This will prevent the trunk from bearing all the stress of the exercise.
- ☐ Head and eyes are directed to the left foot on count one and to the right foot on count three.
- ☐ Maintain equal weight over both feet throughout the exercise.

Precautions: Range of motion on counts one and three is determined by the student's limitations.

Calisthenic Drill 1; Exercise 7

The Forward Lunge and Reach

Purpose: This exercise develops balance and leg strength.

Starting Position: Straddle Stance with hands on hips.

Cadence: Slow/Moderate.

Count:

1. Take an exaggerated step forward with the left leg while raising both arms fully overhead. Allow the left knee to bend until the thigh is parallel to the ground.
2. Return to the starting position.
3. Repeat count one with the right leg.
4. Return to the starting position.



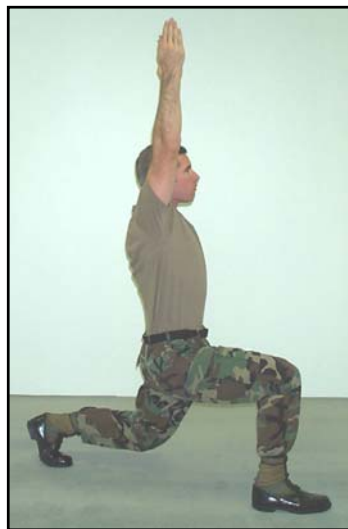
Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ Maintain straightness of the back by keeping the abdominal muscles tight throughout the motion.
- ☐ Reach fully overhead with both arms shoulder width apart, palms facing one another, fingers and thumbs extended and joined.
- ☐ Step and lunge in a straight line, keeping the feet directed forward. Viewed from the front, the feet are shoulder width apart, both at the starting position, and at the end of counts one and three.
- ☐ The rear knee bends but does not touch the ground.
- ☐ The heel of the rear foot should be raised off of the ground.
- ☐ On counts one and three, the forward knee should not go beyond the toes.

Precautions: On counts one and three, move into position in a controlled manner. Spring off of the forward leg to return to the starting position. This avoids jerking the trunk to create momentum.

Calisthenic Drill 1; Exercise 8

The Prone Row

Purpose: This exercise develops strength of the back and shoulders.

Starting Position: Prone position with the arms overhead, palms down, 1-2 inches off the ground.

Cadence: Slow/Moderate.

Count:

1. Raise the head and chest slightly while lifting the arms and pulling them rearward. Hands make fists as they move toward shoulders.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2

Count 3

Count 4

Check Points:

- ❑ At the starting position, the hips are set and the abdominal muscles are tight.
- ❑ On counts one and three, the forearms are parallel to the ground and slightly higher than the trunk.
- ❑ On counts one and three, the head is raised to look forward but not skyward.
- ❑ Throughout the exercise, the legs and toes remain in contact with the ground.

Precautions: Prevent overarching of the back by maintaining contractions of the abdominal and buttocks muscles throughout the exercise.



Calisthenic Drill 1; Exercise 9

The Bent-leg Body Twist

Purpose: This exercise strengthens trunk muscles and promotes control of trunk rotation.

Starting Position: Supine Position with the hips and knees bent to 90-degrees, arms sideward, palms down with fingers spread. Legs and feet are together.

Cadence: Slow.

Count:

1. Rotate the legs to the left while keeping the upper back and arms in place.
2. Return to the starting position.
3. Repeat count one to the right.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ Tighten abdominal muscles in the starting position. Maintain this contraction throughout the exercise.
- ☐ The head should be 1-2 inches off the ground with the chin slightly tucked.
- ☐ Ensure that the hips and knees maintain 90-degree angles.
- ☐ Keep the feet and knees together throughout the exercise.
- ☐ Attempt to rotate the legs to about 8-10 inches off the ground. The opposite shoulder must not rise off the ground.

Precautions: This exercise is always performed at a slow cadence. Students should not rotate the legs to a point beyond which they can no longer maintain contact with the ground with the opposite arm and shoulder.

Calisthenic Drill 1; Exercise 10

The Push-up

Purpose: This exercise strengthens the muscles of the chest, shoulders, arms, and trunk.

Starting Position: Front Leaning Rest Position.

Cadence: Moderate/Fast.

Count:

1. Bend the elbows, lowering the body until the upper arms are parallel with the ground.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ The hands are in line with the shoulders with fingers spread, middle fingers point straight ahead.
- ☐ On counts one and three the upper arms stay close to the trunk, elbows pointing rearward.
- ☐ On counts two and four, the elbows straighten but do not lock.
- ☐ The trunk must not sag. To prevent this, tighten the abdominal muscles while in the starting position and maintain this contraction throughout the exercise.

Precautions: Students should go to their knees when the trunk begins to sag or when counts two and four involve jerking movements.

Variations: Students may perform this exercise from their fists if wrist discomfort is an issue. When no longer able to execute the exercise with proper form, students may drop to their knees on the second and fourth counts. They must still maintain a straight line from head to knees.

Calisthenic Drill 2; Exercise 1

The Woodchopper

Purpose: This exercise coordinates the extremities and trunk in a dynamic movement. It reinforces proper trunk position while reaching overhead and to the ground.

Starting Position: Straddle stance, arms overhead, hands joined, fingers interlaced.

Cadence: Moderate.

Count:

1. Squat with the heels flat while lowering the arms between the knees.
2. Move through the starting position and rise onto the balls of the feet.
3. Repeat count one.
4. Move through the starting position to rise onto the balls of the feet. On the last repetition, halt at the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ From the starting position, ensure that students have their hips set, their abdominals tight, and their arms as fully overhead as possible.
- ☐ On counts one and three, the shoulders, knees, and balls of the feet should be aligned.
- ☐ On counts one and three, the trunk remains straight though leaning forward.
- ☐ On counts one and three, the heels remain on the ground.
- ☐ On counts two and four, do not allow the trunk to bend backward past the starting position.

Precautions: Do not allow the back to round on counts one and three, as this may excessively load the spine when executing at a moderate cadence.

Calisthenic Drill 2; Exercise 2

The Mountain Climber

Purpose: This exercise develops stability of the trunk and shoulders. It coordinates upper body stability with lower body mobility. It also develops efficient movement to and from the ground when one leg is restricted.

Starting Position: Assume the front leaning rest position. Bring the left foot forward, moving the left knee toward the chest.

Cadence: Moderate.

Count:

1. Spring the lower extremities off the ground and bring the right foot forward and simultaneously thrust the left foot rearward.
2. Return to the starting position.
3. Spring the lower extremities off the ground and bring the left foot forward and simultaneously thrust the right foot rearward.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ At the starting position, the hands are directly below the shoulders with fingers spread and the middle finger directed straight forward.
- ☐ At the starting position and throughout the exercise, the knees remain between the arms.
- ☐ Throughout the exercise, the legs move straight forward and back, not at angles.
- ☐ Throughout the exercise, remain on the balls of the feet.
- ☐ Throughout the exercise, the back remains straight, the abdominals tight, and the trunk and hips remain stationary as legs change positions.

Precautions: Students with knee limitations should bear more of their body weight through the arms. At the starting position and throughout the exercise, foot placement is determined by individual capabilities. Avoid excessive springing upward with each count.

Calisthenic Drill 2; Exercise 3

The Squat Jumper

Purpose: This exercise stimulates balance and develops explosive strength of the legs.

Starting Position: Staggered crouch with the left leg back, hands on top of head.

Cadence: Moderate/Fast.

Count:

1. Jump and switch legs in mid-air to land with the right leg back.
2. Jump and switch legs in mid-air to return to the starting position.
3. Repeat count one.
4. Repeat count two.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ At the starting position and on each landing, the forward thigh is parallel to the ground, the heel is down, and the knee is aligned vertically with the ball of the foot.
- ☐ At the starting position and on each landing, the feet are oriented to the front.
- ☐ At the starting position and on each landing, the trunk is straight but tilted slightly forward.
- ☐ On each landing, the balls of the feet touch first. The heel of the forward foot touches down after the ball of the foot. The heel of the rearward foot does not touch down.

Precautions: Do not allow the knee of the forward leg to pass beyond the toes. Do not jerk the trunk to return to gain height for the jump.

Calisthenic Drill 2; Exercise 4

The V-up

Purpose: This exercise develops the abdominal and hip flexor muscles while developing balance.

Starting Position: Supine Position, arms on ground 45-degrees to the side, palms down with fingers spread. The chin is tucked and the head is 1-2" off the ground.

Cadence: Moderate.

Count:

1. Raise straight legs and trunk to form a V-position, using the arms as needed.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ At the starting position, tighten the abdominal muscles to tilt the pelvis and the lower back toward the ground.
- ☐ On counts one and three, the knees and trunk are straight with the head in line with the trunk.
- ☐ Feet and knees are together throughout the exercise.

Precautions: To protect the back, do not jerk the legs and trunk to rise to the V-position.

Calisthenic Drill 2, Exercise 5

The Power Jump

Purpose: This exercise develops explosive strength and reinforces correct jumping and landing form.

Starting Position: Straddle Stance, arms overhead.

Cadence: Moderate/Fast.

Count:

1. Squat and bend forward and touch the ground with arms extended and palms inward.
2. Jump and extend arms overhead, then land in the starting position.
3. Repeat count one.
4. Without jumping, return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ From the starting position, ensure that students have their hips set, their abdominals tight, and their arms as fully overhead as possible.
- ☐ On counts one and three, keep the back straight with head up and eyes forward.
- ☐ On counts two and four, the arms should be extended fully overhead, shoulder width apart with palms facing one another, fingers and thumbs extended and joined.
- ☐ On the landing, the feet should be directed forward and no more than shoulder distance apart. The landing should be “soft” and proceed from the balls of the feet to the heels. A vertical line from the shoulders through the knees to the balls of the feet should be achieved on each landing.
- ☐ **Precautions:** Don’t exaggerate count two on the first few repetitions; gradually progress to higher jumps.

Calisthenic Drill 2; Exercise 6

The One-leg Push-up

Purpose: This exercise strengthens muscles of the chest, shoulders, arms, and trunk. Raising one leg while maintaining proper trunk position makes this an excellent trunk stabilizing exercise.

Starting Position: Front Leaning Rest Position.

Cadence: Moderate/Fast.

Count:

1. Bend the elbows, lowering the body until the upper arms are parallel with the ground while raising the left leg until 8-10 inches off the ground.
2. Return to the starting position.
3. Repeat count one, bringing the right leg to 8-10 inches off the ground.
4. Return to the starting position.



Starting Position



COUNT 1



COUNT 2



CCOUNT 3



COUNT 4

Check Points:

- ☐ Perform a squat thrust to move into the front leaning rest, maintaining the body straight from head to heels. Body weight is supported on the hands and balls of the feet.
- ☐ The fingers should be extended and spread so that the middle fingers point straight ahead and are directly in line with the shoulders.
- ☐ On counts one and three, the upper arms stay close to the trunk.
- ☐ On counts two and four, the elbows straighten but do not lock.
- ☐ On counts one and three, the raised leg is straight and aligned with the trunk with the toe pointed to the rear.
- ☐ The trunk must not sag. To prevent this, tighten the abdominal muscles while in the starting position and maintain this contraction throughout the exercise.

Precautions: Do not jerk the leg to be raised past straight alignment with the trunk, as this may place undue stress on the back.

Variation: Students may perform this exercise on their fists if wrist discomfort is an issue.

Calisthenic Drill 2; Exercise 7

The Diagonal Lunge and Bend

Purpose: This exercise develops balance, flexibility, and leg strength. The diagonal direction of the lunge promotes better control of lateral movements.

Starting Position: Straddle stance, arms overhead.

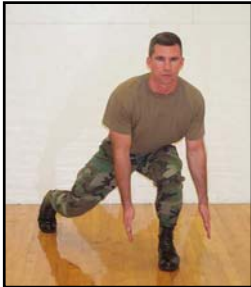
Cadence: Moderate.

Count:

1. Lunge at a 45-degree angle to the left as the trunk bends forward and the arms are lowered to the outsides of the left lower leg.
2. Return to the starting position.
3. Repeat count one to the right.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ❑ On counts one and three, the left/right foot is pointed directly forward (12 o'clock).
- ❑ On counts one and three, the trunk remains straight though bent forward from the hips.
- ❑ On counts one and three, the left/right knee should be vertically aligned with the foot.
- ❑ On counts one and three, the arms remain straight, shoulder width apart, palms facing one another with fingers and thumbs extended and joined.
- ❑ On counts two and four, return to the starting position by vigorously pushing off with the left/right leg, not by jerking the trunk.

Precautions: Do not allow the knee of the lunging leg to pass beyond the toes. Do not jerk the trunk to return to the starting position.

Calisthenic Drill 2; Exercise 8

The Body Arch

Purpose: This exercise develops strength and mobility of the back and shoulders.

Starting Position: Prone Position with arms overhead, palms down on the ground.

Cadence: Moderate.

Count:

1. Raise the arms, head, and chest 4-6 inches off the ground.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4

Check Points:

- ☐ At the starting position, the hips are set and the abdominals are tight.
- ☐ Throughout the exercise, keep the feet together and in contact with the ground.
- ☐ Throughout the exercise, keep the arms and legs straight but not locked.

Precautions: Jerking the trunk on counts one and three may cause stress to the lower back.

Calisthenic Drill 2; Exercise 9

The Leg Tuck and Twist

Purpose: This exercise develops trunk strength and mobility while maintaining balance.

Starting Position: Seated with trunk straight but leaning backward 45-degrees, arms straight, and hands on ground 45-degrees to the rear, palms down with fingers spread. Legs are straight, extended to the front and 8-10 inches off the ground.

Cadence: Moderate.

Count:

1. Raise legs and draw the knees toward the left shoulder.
2. Return to the starting position.
3. Repeat count one to the right side.
4. Return to the starting position.



Starting Position



Count 1



Count 2

Check Points:

- ☐ At the starting position, tighten the abdominals to stabilize the trunk.
- ☐ On all counts, the legs and knees stay together.
- ☐ On counts one and three, the head and trunk remain still as the legs move.
- ☐ On counts one and three, the legs are tucked (bent) and aligned diagonal to the trunk.

Precautions: To protect the back on counts one and three, do not jerk the legs and trunk to achieve counts one and three.



Count 3



Count 4

Calisthenic Drill 2; Exercise 10

The 8-Count Push-Up

Purpose: This exercise combines the functional movements of the squat thrust and push-up to develop total body strength, endurance, and mobility.

Starting Position: Attention.

Cadence: Moderate.

Count:

1. Assume the squat position.
2. Thrust the legs backward to the front leaning rest position.
3. Bend the elbows, lowering the body until the upper arms are parallel with the ground.
4. Return to the front leaning rest position.
5. Repeat count three.
6. Repeat count four.
7. Return to the squat position.
8. Return to the starting position.



Starting Position



Count 1



Count 2



Count 3



Count 4



Count 5



Count 6



Count 7



Count 8

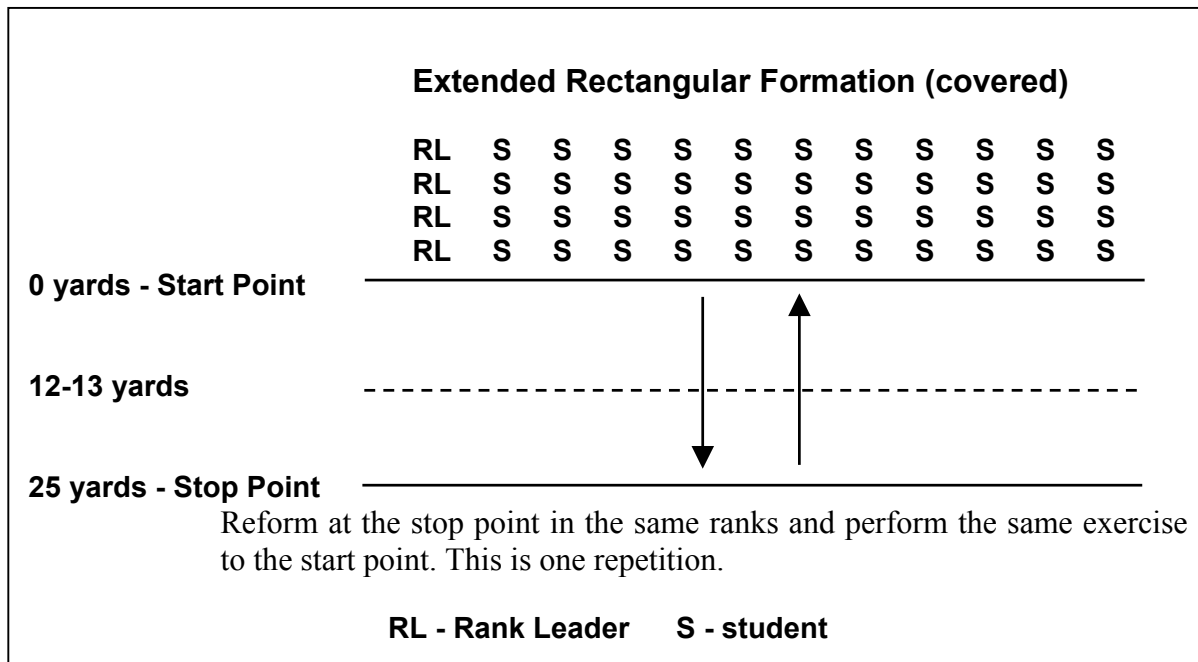
Check Points:

- ❑ On counts one through seven, the hands are directly below the shoulders with fingers spread and the middle finger directed straight forward.
- ❑ On counts one and seven, the heels are together and raised.
- ❑ On counts four and six, the elbows straighten but do not lock.
- ❑ The trunk must not sag. To prevent this, tighten the abdominal muscles while in the starting position and maintain this contraction throughout the exercise.

Precautions: Allowing the trunk to sag, especially on count two, may place excessive strain on the back. Avoid this by maintaining a strong abdominal contraction throughout the exercise.

▪ Guerrilla Drills

Guerrilla Drills are essential to developing the functional mobility needed to perform critical tasks. The drills described are designed to enhance individual movement efficiency and the manipulative skills required to functionally employ strength, endurance, and mobility.



Conducting Guerrilla Drills

Guerrilla drills are conducted in-line using 25-yard intervals as shown in the figure. The start and stop points must be marked by some means (cones, stakes, lines, etc.). One repetition is 50 yards; 25-yards in one direction (down) and 25-yards in the other direction (back), for all exercises except the Shuttle Sprint.

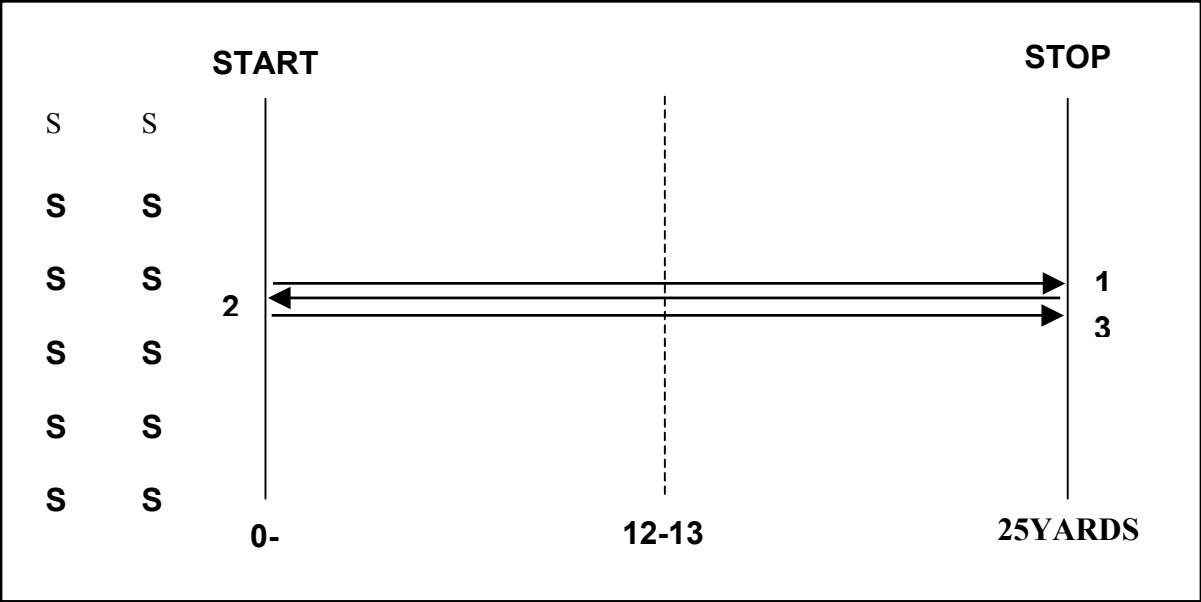
The exercises in Guerrilla Drill 1 develop anaerobic endurance and mobility. The movements and carries in Guerrilla Drill 2 will develop strength, as well as, endurance and mobility

- When the first rank reaches the halfway point (12-13 yards), the PRT leader commands, ***“Second Rank, Ready, GO.”*** The second rank initiates the first half repetition of Verticals. The third rank moves to the start point and assumes the starting position. The first rank has reached the 25-yard stop point and waits for the second, third, and fourth ranks.

-
- When the second rank reaches the halfway point (12-13 yards), The PRT leader commands, **“Third Rank, Ready, GO.”** The third rank initiates the first half repetition of Verticals. The fourth rank moves to the start point and assumes the starting position. The second rank has reached the 25-yard stop point and waits with the first rank for the third and fourth ranks.
 - When the third rank reaches the halfway point (12-13 yards), The PRT leader commands, **“Fourth Rank, Ready, GO.”** The fourth rank initiates the first half repetition of Verticals. The third rank has reached the 25-yard stop point and waits with the first and second rank for the fourth rank.
 - When the fourth rank clears the 25-yard stop point, the same command sequence is repeated for the second half of the verticals repetition which will return the four ranks back to the start point. This is one repetition of Verticals.

The previous command sequence is used for all exercises except the Shuttle Sprint. When conducting the Shuttle Sprint, the PRT leader waits until the preceding rank has completed two 25-yard intervals (down and back) before initiating movement of the next rank. The commands for the Shuttle Sprint are as follows:

- The PRT leader states, **“The Shuttle Sprint.”** The first rank responds, **“The Shuttle Sprint.”** The first rank assumes the starting position.
- The PRT leader commands, **“First Rank, Ready, GO.”** The first rank initiates the Shuttle Sprint. The second rank moves to the start point and assumes the starting position.
- The first rank performs the Shuttle Sprint for 25-yards (down), turns, and runs 25-yards back to the start point, turns, and runs 25 yards to the end point (this is one half repetition). When the first rank reaches the halfway point (12-13 yards) after their second turn, the PRT leader commands, **“Second Rank, Ready, GO.”** The second rank initiates the Shuttle Sprint. The third rank moves to the start point and assumes the starting position.
- The command sequence and procedures for the remaining ranks is the same as above.
- The PRT leader uses the same commands and procedures to perform the second half repetition of the shuttle Sprint. Students will finish the exercise at the same place they started.



Conducting the Shuttle Sprint

Guerrilla Drill 1; Exercise 1

Verticals

Purpose: This exercise promotes a strong running posture.

Starting Position: Straddle Stance.

Movement: Bring the hips quickly to 90-degrees of bend without raising the knees above waist level. Ground contact should be primarily with the balls of the feet. When the left leg is forward, the right arm swings forward and the left arm is to the rear. When the right leg is forward, the left arm swings forward and the right arm is to the rear.



- ☐ Checkpoints:
- ☐ Arm swing is strong and smooth with the forward arm at 90-degrees and the rearward arm relatively straight.
- ☐ Arm swing is from front to rear, not side to side, with the upper part of the forward arm reaching parallel to the ground as it swings to the front.
- ☐ Keep a tall stance with a stable, upright trunk. The back remains perpendicular to the ground.
- ☐ There should not be any back swing of the legs.

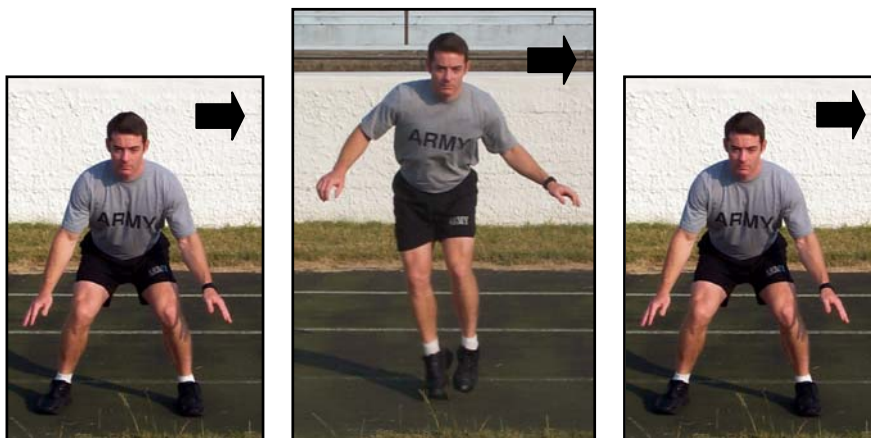
Guerrilla Drill 1; Exercise 2

Laterals

Purpose: This exercise trains students to move laterally.

Starting Positon: Straddle stance, slightly crouched, with the back straight, arms at the side with elbows bent at 90-degrees and palms facing forward or holding weapon. Face perpendicular to the direction of movement.

- ❑ **Movement:** Step to the side by rising slightly and bringing the trailing leg to the lead leg. Quickly hop to the side and land back in the crouch with the knees shoulder width apart. Always face the same direction so that the first 25-yards is moving to the left and second 25-yards is moving to the right.



- ❑ Checkpoints:
- ❑ Pick feet up with each step. Avoid dragging feet along the ground.
- ❑ Crouch slightly while keeping the back straight.
- ❑ Rank leaders will face their rank throughout the exercise.

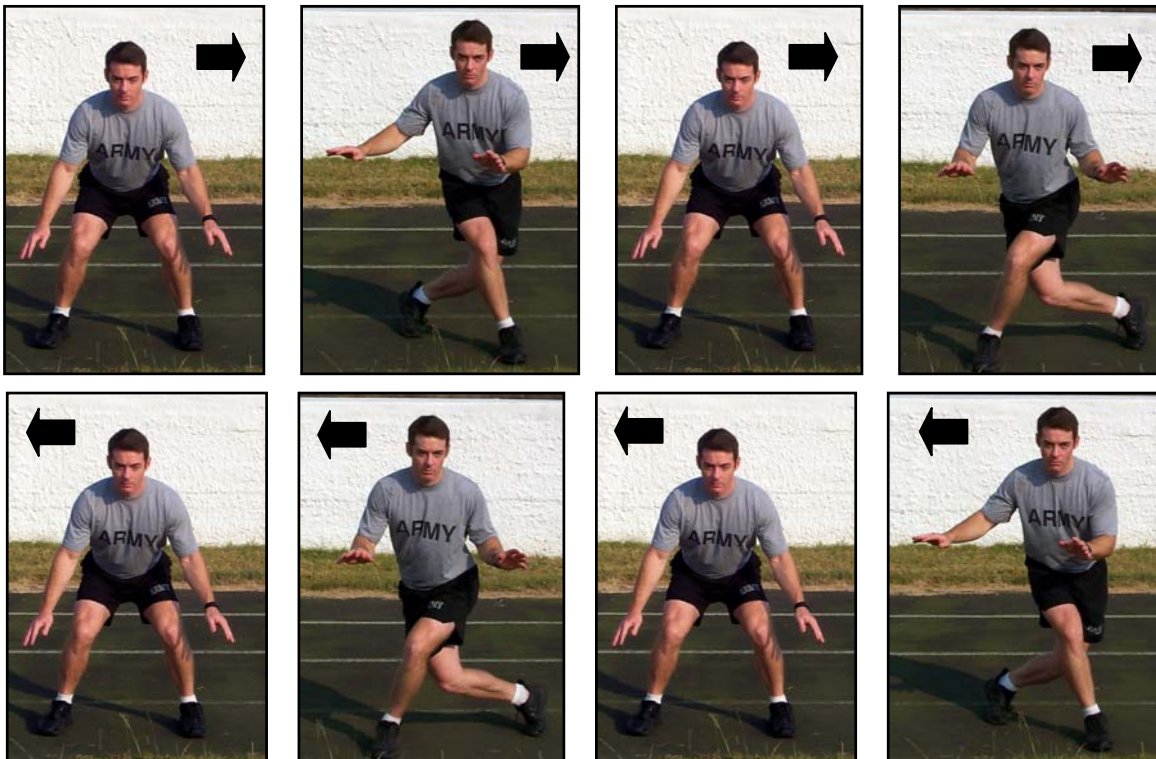
Guerrilla Drill 1; Exercise 3

Crossovers

Purpose: This exercise improves leg coordination and trains students to move laterally.

Starting Position: Straddle stance, slightly crouched, with the back straight, arms at the side with elbows bent at 90-degrees and palms facing forward or holding weapon. Face perpendicular to direction of movement.

- ❑ **Movement:** Cross the trail leg first to the front of the lead leg and step in the direction of travel to return to the starting position. Then cross the trail leg to the rear of the lead leg and step in the direction of travel to return to the starting position. Repeat sequence to the 25-yard stop point. Always face the same direction so that the first 25-yards is moving to the left and the second 25-yards is moving to the right.



- ❑ Checkpoints:
- ❑ Pick the feet up with each step. Avoid dragging the feet along the ground.
- ❑ Crouch slightly while keeping the back straight.
- ❑ Maintain the trunk perpendicular to the direction of travel while allowing the hips to move naturally.
- ❑ Rank leaders will face their rank throughout the exercise.

Guerrilla Drill 1; Exercise 4

The Power Skip

Purpose: This exercise develops leg power, coordination, and jumping ability from a single leg. It also promotes a powerful extension from the ankle, knee, and hip.

Starting Position: Straddle Stance.

Movement: Step and then hop and land on the same leg, followed by the same action with the opposite leg. When the right leg is forward, the left arm swings forward and the right arm is to the rear. When the left leg is forward, the right arm swings forward and the left arm is to the rear.



- ❑ Checkpoints:
- ❑ Start slowly and progress the speed and height of the skip with each 25-yard interval.
- ❑ Students should gradually incorporate larger arm swings as they jump in order to get higher elevation. Arm swing is strong and smooth with the forward arm at 90-degrees and the rearward arm relatively straight.
- ❑ Arm swing is from front to rear, not side to side, with the upper part of the forward arm reaching parallel to the ground as it swings to the front.

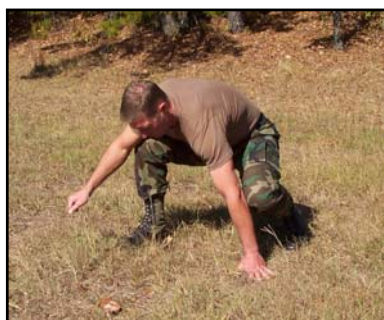
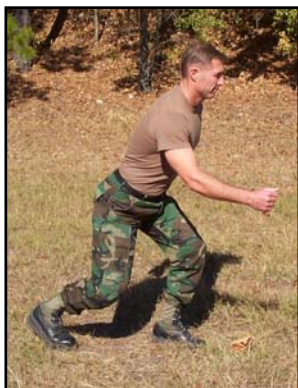
Guerrilla Drill 1; Exercise 5

The Shuttle Sprint

Purpose: This exercise develops anaerobic endurance, leg speed, and agility.

Starting Position: Straddle Stance.

- ❑ **Movement:** Run quickly to the 25-yard mark. Turn clockwise while planting the left foot and bending and squatting to touch the ground. Run quickly back to the starting line and plant the right foot, turn counter-clockwise and touch the ground with the right hand. Run back to the 25-yard mark gradually accelerating to near maximum speed.



- ❑ Checkpoints:
- ❑ Students should slow their movement before planting feet and changing direction.
- ❑ Students should both bend the trunk and squat when reaching to touch the ground as they change direction.
- ❑ Students touch the ground with their left hand on the first turn, then with their right hand on the second turn.
- ❑ Accelerate to near maximum speed during the last 25-yard interval.
- ❑ **Precautions:** Students should use caution when performing this exercise on wet terrain.

Guerrilla Drill 2; Exercise 1

The Shoulder Roll

Purpose: This exercise develops the student's ability to safely fall and roll-up to a standing position.

Starting Position: Straddle Stance.

Movement:

Step forward with the left foot, squat down and make a wheel with the arms by placing the left hand on the ground with the fingers facing to the rear and the right hand also on the ground with the fingers facing forward. Tuck the chin to avoid injury to the neck. Push off with the right leg and roll over the left shoulder along right side of the body. To roll to the opposite side, step forward and switch hand and leg positions. Progress to continuously walking and rolling on opposite sides.

Checkpoints:



- ☐ Lead with the left foot when rolling on the left shoulder and the right foot when rolling on the right shoulder.
- ☐ Hands are placed on the ground with the middle fingertips together and facing one another so that the arms form a wheel.
- ☐ Rotate the upper body so that the lead elbow is pointing straight to the front while maintaining a wheel with the arms.
- ☐ Tuck the chin so that ground contact is made with the arms, shoulder blades, and back not with the neck.
- ☐ The momentum of the roll brings students up to their knees. Continue to the feet by pushing off with the rear leg while standing up on the front leg.

Precautions: The PRT leader and AI(s) must ensure that students are in the proper squatting position for the roll with hands on the ground and the chin tucked before rolling.

Guerrilla Drill 2; Exercise 2

The Lunge Walk

Purpose: This exercise develops the leg power needed to move both vertically and horizontally.

Starting Position: Straddle Stance.

Movement: Walk forward, starting with the left foot, stepping as in the forward lunge. Lightly touch the knee of the rear leg to the ground with each step. Without returning to the starting position, continue to lunge walk to the 25-yard stop point by alternating legs.



Checkpoints:

- ☐ Incorporate arm swing with the arm opposite the forward leg, raise the arm to parallel with the ground.
- ☐ Keep the back straight and the head up.
- ☐ Do not allow the knee of the lead leg to move forward of the toes.

Precautions: Do not allow the knee of the rear leg to forcefully contact the ground.

Guerrilla Drill 2; Exercise 4

The High Crawl Crouch Run

Purpose: This exercise develops the ability to high crawl and run quickly in a crouched position.

Starting Position: Prone Position.

Movement: High crawl for 10 yards. Run forward in the crouch position to the 25-yard stop point.



Checkpoints:

- ❑ While lying prone on the ground, raise the body, supporting weight on the forearms and the lower legs. Keep the knees well behind the buttocks. Keep the buttocks low. Move forward by alternately advancing the right elbow and the left knee, then advance the left elbow and the right knee.
- ❑ Move from the high crawl to the crouch run by assuming the Mountain Climber starting position and firing out to the crouch run.
- ❑ On the crouch run, stay low with minimal arm swing.

Guerrilla Drill 2; Exercise 4

The Saddleback Carry

Purpose: This exercise develops the student's ability to carry a conscious student of comparable size.

Starting Position: Student A stands in front of student B. Student B mounts student A's hips and clasps his hands around student A's chest. Student A grasps student B's thighs securing this position.

Movement: Student A quick times 25-yards, then student B dismounts and the students change positions and return to the start point.



Checkpoints:

- ❑ Students squat deep enough to allow partners to mount hips without jumping.

Precautions: Students should not jump on their partners back to assume the carry position. All movement in the carry position is performed at a quick time.

Guerrilla Drill 2; Exercise 5

The Fireman's Carry

Purpose: This exercise develops the student's ability to carry a conscious or unconscious student of comparable size.

Starting Position: Student **B** assumes the prone position, arms overhead. Student **A** straddles student **B** and squats, reaching under student **B**'s armpits. Student **A** stands lifting student **B** to his knees. Student **A** claps his hands around student **B**'s chest and continues to lift student **B** to his feet, leaning him back slightly to lock the legs. Student **A** raises one of student **B**'s arms overhead, and walks under the arm to the front of student **B** oriented sideways to student **B**. Student **A** bends his knees and leans forward, placing one arm through student **B**'s legs. Student **A** leans student **B** forward until he lies across student **A**'s shoulders. Student **A** stands up, lifting student **B** off the ground. Student **A**, using the hand of the arm through Student **B**'s legs, grasps the wrist of student **B**'s arm that is hanging over his shoulder.

Movement: Student **A** moves 25-yards at a quick time, then student **B** dismounts and the students change positions and return to the starting point.

Checkpoints:



- ☐ Students should squat low and grasp the student under the arms to lift them from the prone position.
- ☐ Position the student over the shoulder during carry. Secure the position with one hand, grasping the student's forward arm.

Precautions: Keep back straight and use legs to lift student to carry position. All movement in the carry position is performed at a quick time.

b. Activity phase: 0:30 (0:45)

■

■ **Climbing Drills**

The purpose of the climbing drills is to improve upper body and core strength and the ability to climb and negotiate obstacles. Success in climbing and surmounting obstacles depends on both conditioning and technique. The entire body is involved during climbing, by helping to change or stabilize position. The hands and feet act as anchor points and initiate movement to the next position. The abdominal and back muscles stabilize the body's position. The arms push and pull upward with assistance from the much stronger legs. The climbing drills combined with calisthenic, and guerrilla drills comprise a balanced program for developing functional strength.

Climbing Drills lose much of their value unless performed exactly as prescribed. Spotters are used to ensure precision and safety by assisting the students when fatigued or unable to properly execute five repetitions on their own. Two spotters will assist students through each exercise. As students become more proficient in each exercise, they will need less assistance and eventually should be able to perform the drill unassisted. **However, spotters will always be present to ensure safety and precise exercise execution.** Spotters will help as needed to minimize swinging and stabilize body position. Precision should never be compromised for quantity of repetitions or speed of movement. Students should perform all movements in a controlled manner without jerking into or out of positions. Students should avoid relaxing in the extended hang position, as this may place excessive stress on the shoulder and elbow joints. Students should maintain a contraction in the muscles of the shoulders and upper back tight to avoid a relaxed extended hang.



HAND POSITIONS

A variety of hand positions are employed throughout the drills to thoroughly train the musculature of the arms, forearms and hands. Hands are placed shoulder width apart with thumbs around the bar for the overhand and underhand grips. Hands are placed next to each other with thumbs around the bar for the alternating grips.



Overhand Grip



Alternating Grip Left



Alternating Grip Right

Climbing Drill 1, Exercise 1 The Straight-arm Pull

Purpose: This exercise develops the ability to initiate the pull-up motion and maintain a contraction in the extended hang position.

Starting Position: Extended hang using the overhand grip.

Cadence: Moderate.

Count:

1. Keeping the arms straight, pull the body upward using the shoulders and upper back muscles only.
2. Return to the starting position.



Starting
Position

Count 1



Count 2



Check Points:

- ❑ Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.
- ❑ Throughout the exercise, keep the elbows straight, but not locked.
- ❑ On count one, pull the body up by engaging the shoulder muscles (squeeze the shoulder blades together).

Climbing Drill 1, Exercise 2 The Heel Hook

Purpose: This exercise develops the ability to raise the legs from a hanging position and hook the feet securely on the bar.

Starting Position: Extended hang using the alternating grip, left or right.

Cadence: Moderate

Count:

1. Pull with the arms and curl the lower body toward the bar. Raise the feet above the bar and interlock them securely around the bar.
2. Return to the starting position.



Starting
Position

Count 1



Count 2



Check Points:

- ☐ Secure the feet over the bar by crossing one foot over the other at the ankles.
- ☐ On count one, initiate movement by first pulling with the arms.
- ☐ On count two, the arms will be fully extended to return to the starting position.

Precautions: Spotters will start with one hand on the lower back and one hand behind the thigh. On count one, spotters must maintain positive control of the exerciser's upper body. This is accomplished by sliding the hand from the lower back to the middle of the back and simultaneously moving the other hand from the back of the thigh to the lower back just before the exerciser hooks the feet around the bar. On count two, the spotter will return the hands to the lower back and behind the thigh after the exerciser has unhooked the feet from the bar to return to the starting position.

Climbing Drill 1, Exercise 3 The Pull-up

Purpose: This exercise develops the ability to pull the body upward while hanging.

Starting Position: Extended hang using the overhand grip.

Cadence: Moderate.

Count:

1. Keeping the body straight, pull upward with the arms until the chin is above the bar.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ❑ Throughout the exercise, keep the feet together.
 - Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.

Climbing Drill 1, Exercise 4 The Leg Tuck

Purpose: This exercise develops the abdominal, hip flexor, and grip strength essential to climbing a rope.

Starting Position: Extended hang using the alternating grip, left or right.

Cadence: Moderate.

Count:

1. Pull up with the arms and raise the knees toward the chest until the elbows touch the thighs just above the knees.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ☐ Throughout the exercise, keep the feet together.
- ☐ On count one, the thighs and elbows touch just above knees.

Climbing Drill 1, Exercise 5

The Alternating Grip Pull-up

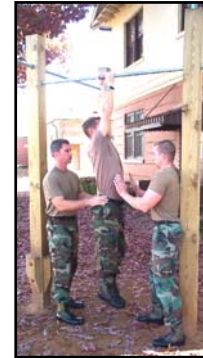
Purpose: This exercise develops the muscles used to pull the body upward while hanging with an alternating grip.

Starting Position: Extended hang using the alternating grip, right or left.

Cadence: Moderate.

Count:

1. Keeping the body straight, pull upward, allowing the head to move to the left or right side of the bar and touch the right or left shoulder to the bar.
2. Return to the starting position.



Count 1



Count 2



Starting
Position

Check Points:

- ☐ If the alternating grip left is used, students should touch their left shoulder to the bar on count one.
- ☐ If the alternating grip right is used, students should touch their right shoulder to the bar on count one.
- ☐ On count two, the arms are fully extended to return to the starting position. Throughout the exercise, keep the feet together.

Climbing Drill 2, Exercise 1

The Flexed-arm Hang

Purpose: This exercise develops the ability to hold the body in the flexed-arm hang position.

Starting Position: Extended hang using the overhand grip.

Cadence: Moderate.

Count:

1. Keeping the body straight, pull upward with the arms until the chin is above the bar and hold for five seconds.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ❑ Throughout the exercise, the palms are facing away from the body, with thumbs around the bar.
- ❑ Throughout the exercise, keep the feet together.

Climbing Drill 2, Exercise 2

The Heel Hook

Purpose: This exercise develops the ability to raise the legs from a hanging position and hook the feet securely on the bar.

Starting Position: Extended hang using the alternating grip, left or right.

Cadence: Moderate.

Count:

1. Pull with the arms and the body toward the bar. Raise the feet above the bar and interlock them securely around the bar.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ☐ Secure the feet over the bar by crossing one foot over the other at the ankles.
- ☐ On count one, initiate movement by first pulling with the arms.
- ☐ On count two, the arms will be fully extended to return to the starting position.

Precautions: Spotters will start with one hand on the lower back and one hand behind the thigh. On count one, spotters must maintain positive control of the exerciser's upper body. This is accomplished by sliding the hand from the lower back to the middle of the back and simultaneously moving the other hand from the back of the thigh to the lower back just before the exerciser hooks the feet around the bar. On count two, the spotter will return the hands to the lower back and behind the thigh after the exerciser has unhooked the feet from the bar to return to the starting position.

Climbing Drill 2, Exercise 3 The Pull-up

Purpose: This exercise develops the ability to pull the body upward while hanging.

Starting Position: Extended hang using the overhand grip.

Cadence: Moderate.

Count:

1. Keeping the body straight, pull upward with the arms until the chin is above the bar.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ☐ Throughout the exercise, keep the feet together.
- ☐ Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.

Climbing Drill 2, Exercise 4 The Leg Tuck

Purpose: This exercise develops the abdominal, hip flexor, and grip strength essential to climbing a rope.

Starting Position: Extended hang using the alternating grip, left or right.

Cadence: Moderate.

Count:

1. Pull up with the arms and raise the knees toward the chest until the elbows touch the thighs just above the knees.
2. Return to the starting position.



Starting
Position



Count 1



Count 2

Check Points:

- ☐ Throughout the exercise, keep the feet together.
- ☐ On count 1, the thighs and elbows touch just above knees.

Climbing Drill 2, Exercise 5

The Alternating Grip Pull-up

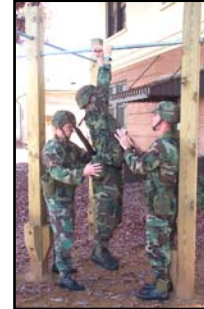
Purpose: This exercise develops the ability to pull the body upward while hanging with an alternating grip.

Starting Position: Extended hang using the alternating grip, right or left.

Cadence: Moderate.

Count:

1. Keeping the body straight, pull upward, allowing the head to move to the left or right side of the bar and touch the right or left shoulder to the bar.
2. Return to the starting position.



**Starting
Position**



Count 1



Count 2

Check Points:

- ☐ If the alternating grip left is used, students should touch the left shoulder to the bar on count one.
- ☐ If the alternating grip right is used, students should touch the right shoulder to the bar on count one.
- ☐ On count two, the arms are fully extended to return to the starting position.
- ☐ Throughout the exercise, keep the feet together.

▪ Running

“Each morning in Africa a gazelle wakes up. It knows it must move faster than the lion or it will not survive. Every morning a lion wakes up and knows it must move faster than the slowest gazelle or it will starve. It doesn’t matter if you are the lion or the gazelle, when the sun comes up, you better be moving.”

Anonymous

The purpose of running is to improve the overall conditioning of the students by developing endurance. Endurance spans a continuum between aerobic and anaerobic systems. Aerobic endurance is developed by performing low to moderate intensity activities for a long duration. Anaerobic endurance is developed by performing high intensity activities for a short duration, resting, then repeating the sequence. Aerobic training alone does not fully prepare students for the functional endurance and strength requirements of common physical tasks. **The analysis of the physical demands needed to successfully accomplish critical tasks demonstrates a more significant requirement for anaerobic endurance.** In order to train the complete spectrum of endurance, both speed running and sustained running must be performed. The running activities described may be performed individually or collectively.

INTEGRATION

The variety of running activities conducted during PRT integrate anaerobic and aerobic training (30:60s, 60:120s, and AGR) as well as the development of certain other skills (300-yard Shuttle Run).

RUNNING FORM



Running Form

HEAD

The head should be held high, with the chin neither pointing up nor down. Allowing the head to ride forward puts undue strain on the muscles of the upper back.

SHOULDERS

The shoulders should assume a neutral posture, neither rounded forward nor forcefully arched backward. Rounding the shoulders forward is the most common fault in everyday posture as well as with running. This is usually associated with tightness of the chest and shoulders. Another problem occurs when the shoulders start to rise with fatigue or increased effort. This position not only wastes energy, but can also adversely affect breathing.

ARMS

Throughout the arm swing, the elbows should stay at roughly a 90-degree bend. The wrists stay straight and the hands remain loosely cupped. The arm swing should be free of tension, but do not allow the hands to cross the midline of the body.

TRUNK AND PELVIS

The trunk should remain over its base of support, the pelvis. A common problem with fatigue is allowing the trunk to lean forward of the legs and pelvis. This forces the lower back muscles to expend too much energy resisting further trunk collapse to the front.

LEGS

For distance running, much of the power is generated from below the knee. Energy is wasted as the knees come higher and the large muscles of the hips and thighs are engaged. Practice getting a strong push-off from the ankle of the back leg. This helps to naturally lengthen the stride. Lengthening the stride by reaching forward with the front leg will be counterproductive.

FEET

The feet should be pointed directly forward while running. With fatigue and certain muscle imbalances, the legs and feet will start to rotate outward. This may hinder performance and create abnormal stresses that contribute to injury.

BREATHING

Breathing should be rhythmic in nature and coordinated with the running stride. For example, perform one breath (in and out) for every four steps; in on steps one and two; out on steps three and four. Jody calls and counting cadence during sustained runs promotes rhythmic breathing. When challenged with faster paced running, jody calls are not appropriate.

SPEED RUNNING

Speed running is based on the premise that a greater amount of intense work can be performed if the work is interspersed with periods of recovery. This has readiness implications, since improvements in physical readiness are affected to a greater extent by the intensity of training than by the frequency or duration of the training. During speed running, students perform a work interval in a specified time for a specific number of repetitions. The work intervals are followed immediately by an active recovery interval. Multiple work intervals cause the onset of fatigue many times during a single training session. Speed running improves the resistance to fatigue of the active muscles by repeatedly exposing them to high intensity effort. As a result of their increased anaerobic and aerobic endurance, students will be able to sustain performance of physically demanding tasks at a higher intensity for a longer duration. The training stimulus associated with speed running occurs from the combination of work and recovery. A very short recovery period may not allow the body to recover sufficiently to perform the next work interval at the desired intensity. A very long recovery period may allow the body to recover too much and some of the training effect would be lost. Generally, duration of the recovery period depends on the intensity and duration of the work interval. An appropriate work to recovery ratio for improving student readiness is 1:2. Speed running has three variables: work duration, recovery duration. The speed running activities appropriate for students to improve physical readiness are intervals (30:60s in the toughening phase and 60:120s in the sustaining phase), the 300-yard Shuttle Run, and hill repeats.

INTERVALS

30:60S

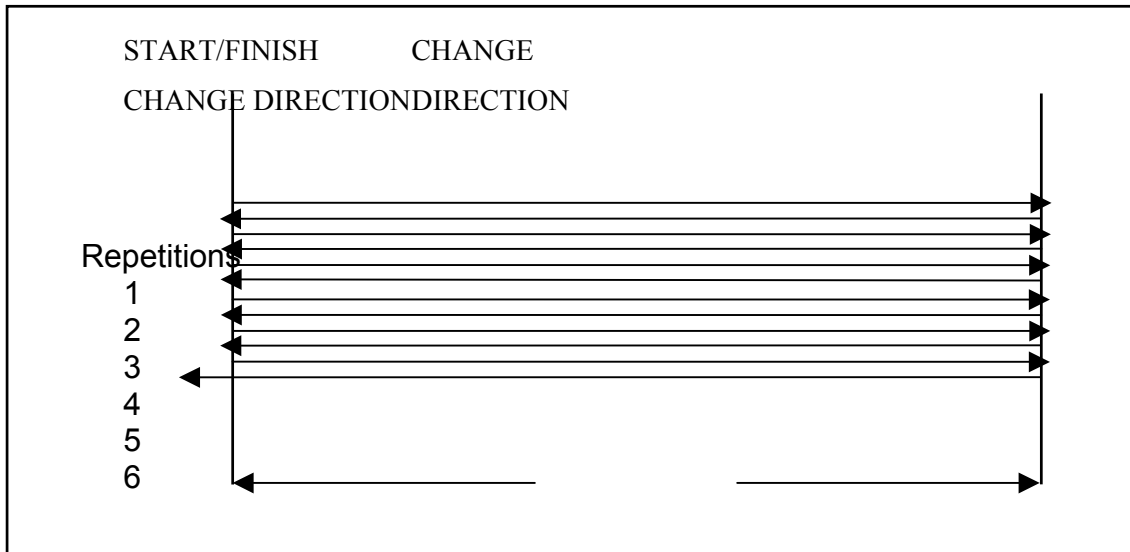
Students in the toughening phase will perform 30:60s, adhering to a work to recovery ratio of 1:2. During the work interval, students will run at a perceived 80% effort for 30 seconds. During the recovery interval, students will walk for 60 seconds. This is one repetition of 30:60s. Initially, students will perform five repetitions. Students will progress to ten repetitions by adding no more than one repetition every two weeks. Students will be performing different numbers of repetitions during the same activity period, based on the number of weeks they have been performing 30:60s. The students who finish early will continue to walk until all students have completed 30:60s. The entire group will walk for two to three minutes prior to performing any subsequent activities or the Recovery Drills.

60:120S

Students in the sustaining phase will perform 60:120s, adhering to a work to recovery ratio of 1:2. During the work interval, students will run at 70-80% perceived effort for 60 seconds. During the recovery interval, students will walk for 120 seconds. This is one repetition of 60:120s. Students will start at four repetitions and progress to six repetitions by adding no more than one repetition every two weeks. Students will be performing different numbers of repetitions during the same activity period, based on the number of weeks they have been performing 60:120s. The entire group will walk for two to three minutes prior to performing any subsequent activities or the Recovery Drills.

300-YD SHUTTLE RUN

The 300-yard Shuttle Run develops the ability to repeatedly sprint after changing direction. It is an indicator of the student's anaerobic endurance, speed, and mobility. The 300-Yard Shuttle Run is conducted from the extended rectangular formation. On the command, "***Get Set,***" one student in each column will move behind the starting line and assume the ready position of their choice. On the command, "***GO,***" the student will run to a line 25-yards from the starting line. They must touch the line or beyond it with the left hand, then return to touch the starting/finish line with the right hand. This is considered one repetition. The student will perform six repetitions alternating touching the lines with opposite hands. On the last (sixth) repetition, the student will run past the starting/finish line without touching it. The PRT leader and AIs will ensure that students run in their own lanes and run with their head up to watch for other students who may be moving in an opposite direction. The shuttle run is performed only one time when performed as an activity during a toughening phase PRT session.



The 300-yard Shuttle Run

SUSTAINED RUNNING DEVELOPS AEROBIC ENDURANCE AND THE ABILITY TO MAINTAIN CONTINUOUS RUNNING. INTENSITY (PACE) AND DURATION (TIME/DISTANCE) ARE FACTORS THAT INFLUENCE IMPROVEMENT IN SUSTAINED RUNNING. THE FOLLOWING SUSTAINED RUNNING ACTIVITIES MAY BE CONDUCTED INDIVIDUALLY OR COLLECTIVELY.

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- c. **Recovery phase: 0:15 (1:00)**

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- **Recovery Drills**

Recovery Drill A and/or B is (are) performed at the end of every PRT session to gradually and safely bring the body back to its pre-exercise state.

The objectives of Recovery are to:

- gradually bring body temperature and heart rate to their resting states
- maintain/improve flexibility and stability
- restore hydration and energy through proper nutrition

Recovery drill A or B or both are performed at the end of every PRT session. Recovery drill A focuses on the lower body and is performed in combination with calisthenics, guerrilla drill 1, the 300-yard shuttle run, running activities, and foot marching. recovery drill B focuses on the upper body

Recovery Drill A, Exercise 1

The Groin Stretch

Purpose: This exercise develops flexibility of the groin and trunk.

Starting Position: Straddle stance, hands on hips.

Position 1: On the command, “*Position One, MOVE*”, lunge wide to the left (9 o’clock position) as the right arm moves overhead to come in line with the right leg and trunk, palm facing inward. Place the left forearm on the left thigh (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, perform the movements of position 1 to the right (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ❑ In position 1, the trunk and head remains directed forward while the bent left leg is directed to the side. The right foot is flat on the ground and directed at 12 o’clock. The left foot is flat on the ground and directed at 9 o’clock.
- ❑ In position 2, the trunk and head remains directed forward while the bent right leg is directed to the side. The left foot is flat on the ground and directed at 12 o’clock. The right foot is flat on the ground and directed at 3 o’clock.
- ❑ In positions 1 and 2, keep the wrist and the elbow of the reaching arm straight to maintain a straight line from fingertip to heels. The fingers and thumbs of the hand of the reaching arm are extended and joined.

Recovery Drill A, Exercise 2

The Hamstring Stretch

Purpose: This exercise develops flexibility of the hamstrings.

Starting Position: Straddle stance, hands on hips.

Position 1: On the command, “*Position One, MOVE*”, stretch the hamstring by taking an exaggerated step forward with the left leg and reach toward the ground by bending at the waist. (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, perform the movements of position 1 to the right (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ In positions 1 and 2, both knees are slightly bent.
- ☐ In positions 1 and 2, the arms are straight with fingers and thumb extended and joined, palms facing one another and directed to the ground on either side of the forward leg.
- ☐ In positions 1 and 2, the back is straight with the head up and eyes directed forward.

Recovery Drill A, Exercise 3

The Calf Stretch

Purpose: This exercise develops flexibility of the calves.

Starting Position: Straddle stance, hands on hips.

Position 1: On the command, “*Position One, MOVE*”, step forward 8-10 inches with the left foot and place the heel on the ground with the toes up. Bend forward and grasp the toes of the left foot with both hands. Straighten the knee of the left foot and pull the toes back toward the shin (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 2: On the command, “*Position Two, MOVE*”, step forward 8-10 inches with the right foot and place the heel on the ground with the toes up. Bend forward and grasp the toes of the right foot with both hands. Straighten the knee of the right foot straight and pull the toes back toward the shin (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ In positions 1 and 2, keep the head up and eyes looking forward of the left/right toe.
- ☐ In position 1, keep the left knee straight and bend the right knee to lower the hips.
- ☐ In position 2, keep the right knee straight and bend the left knee to lower the hips.

Recovery Drill A, Exercise 4

The Thigh Stretch

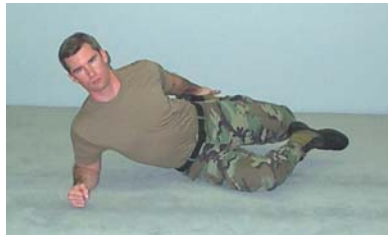
Purpose: This exercise develops flexibility of the front of the thigh and the hip flexor muscles.

Starting Position: On the command, *Starting Position, MOVE*, assume a seated position with legs straight and to the front, feet together.

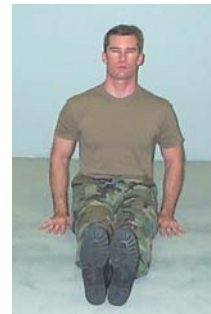


Position 1: On the command, *Position One, MOVE*, lay on the right side and place the right forearm on the ground, perpendicular to the chest. The right hand makes a fist on the ground with the thumb up. Grasp the left ankle with the left hand and pull the left heel toward the buttocks and pull the entire leg rearward. Push the left thigh further to the rear with the bottom of the right foot (hold for 10 seconds). On the command, *“Starting Position, MOVE”*, assume the starting position.

Position 2: On the command, *Position Two, MOVE*, roll onto the left side and place the left forearm on the ground, perpendicular to the chest. The left hand makes a fist on the ground with the thumb up. Grasp the right ankle with the right hand and pull the right heel toward the buttocks and pull the entire leg rearward. Push the right thigh further to the rear with the bottom of the left foot (hold for 10 seconds). On the command, *“Starting Position, MOVE”*, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ Keep the abdominal muscles tight throughout this stretch in order to keep the trunk straight.
- ☐ Do not pull the heel forcefully to the buttock if there is discomfort in the knee joint. In this case, achieve a beneficial stretch by allowing the knee to straighten slightly and just pull the thigh further to the rear.

Recovery Drill A, Exercise 5

The Hip Stretch

Purpose: This exercise develops flexibility of the back of the hip.

Starting Position: On the command, “*Starting Position, MOVE*”, assume the supine position on the ground.



Position 1: On the command, “*Position One, MOVE*”, raise both feet off the ground and cross the left ankle over the right thigh. Grasp the left knee with both hands and pull it towards the right shoulder while raising the right thigh toward the chest (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ Keep the back flat on the ground.
- ☐ In positions 1 and 2, raise the head 1-2 inches from the ground with the chin tucked.

Recovery Drill B, Exercise 1

The Overhead Arm-pull

Purpose: This exercise develops flexibility of the arms, shoulders, and trunk.

Starting Position: Straddle stance, hands on hips.

Position 1: On the command, “*Position One, MOVE*”, raise the right arm overhead and place the right hand behind the head. Grasp below the right elbow with the left hand and pull to the left, leaning the body to the left (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, raise the left arm overhead and place the left hand behind the head. Grasp below the left elbow with the right hand and pull to the right, leaning the body to the right (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ Throughout the exercise, keep the hips set and the abdominals tight.
- ☐ In positions 1 and 2, lean the body straight to the side, not to the front or back.

Recovery Drill B, Exercise 2

The Turn and Reach

Purpose: This exercise develops the ability to control trunk rotation while increasing chest, shoulder, and trunk range of motion.

Starting Position: Straddle stance with arms sideward, palms up.

Position 1: On the command, “*Position One, MOVE*”, rotate the trunk to the left while keeping the hips directed forward to bring the arms in line from front to rear. The head and eyes remain directed forward. Continue to pull the arms toward the front and rear (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 2: On the command, “*Position Two, MOVE*”, rotate the trunk to the right while keeping the hips directed forward to bring the arms in line from front to rear. The head and eyes remain directed forward. Continue to pull the arms toward the front and rear (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ Keep the hips set and abdominal muscles tight throughout to prevent excessive rotation.
- ☐ Keep the feet directed forward, do not allow the hips to rotate with the trunk.
- ☐ Maintain straightness of the trunk throughout the exercise. Do not lean forward or back.
- ☐ Throughout the exercise, the arms are parallel to the ground at shoulder height. Rotate the arms to the rear so that the palms are facing up and the shoulders and chest are opened.
- ☐ In position 1, reach forward with the right arm and to the rear with the left arm.
- ☐ In position 3, reach forward with the left arm and to the rear with the right arm.

Precautions: If students cannot reach the standard of positions 1 and 2, they should rotate their trunk to their individual limitations while keeping the hips, head, and eyes directed forward.

Recovery Drill B, Exercise 3

The Rear Lunge and Reach

Purpose: This exercise develops flexibility of the hip flexors and trunk muscles.

Starting Position: Straddle stance, hands on hips.

Position 1: On the command, “*Position One, MOVE*”, step rearward with the left foot and reach overhead with both arms. This is the same position as count 1 of the Rear Lunge and Reach in Calisthenic Drill 1 (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, perform the movements of Exercise Position 1 with the right leg and arms (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ Maintain straightness of the back by keeping the abdominal muscles tight throughout the motion.
- ☐ Reach fully overhead with both arms. Arms should be shoulder width apart with palms facing one another with the fingers and thumb extended and joined.
- ☐ After the foot touches down on counts one and three, allow the body to continue to lower. This promotes a better opening of the hip and trunk.
- ☐ Lunge and step in a straight line, keeping the feet directed forward. Viewed from the front, the feet are shoulder width apart, both at the starting position, and at the end of counts one and three.
- ☐ Keep the forward knee over the ball of the foot on counts one and three.

Recovery Drill B, Exercise 4

The Extend and Flex

Purpose: This exercise develops flexibility of the low back, hip, hip flexor, and abdominal muscles.

Starting Position: The front leaning rest position.



Position 1: On the command, “*Position One, MOVE*”, lower the body, sagging in the middle, keeping the arms straight and look upward (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, drop to the knees and sit back onto the legs by moving the buttocks toward the heels. (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



Position 2



Starting Position

Check Points:

- ☐ In position 1, the thighs and pelvis may rest on the ground. Relax the back muscles while bearing the bodyweight through the straight arms. Toes may point to the rear.
- ☐ In position 2, the toes are pointed to the rear and the arms are shoulder width apart, palms down on the ground.
- ☐ In position 2, slide the hands to the rear to allow the buttocks to move toward the heels.
- ☐ Feet are together throughout the exercise.

Recovery Drill B, Exercise 5

The Single-leg Over

Purpose: This exercise develops flexibility of the hips and lower back.

Starting Position: Supine position with arms sideward, palms down.



Position 1: On the command, “*Position One, MOVE*”, turn the body to the left, bend the right knee to 90-degrees over the left leg, and grasp the outside of the right knee with the left hand and pull toward the left (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.

Position 2: On the command, “*Position Two, MOVE*”, (hold for 10 seconds). On the command, “*Starting Position, MOVE*”, assume the starting position.



Position 1



Starting Position



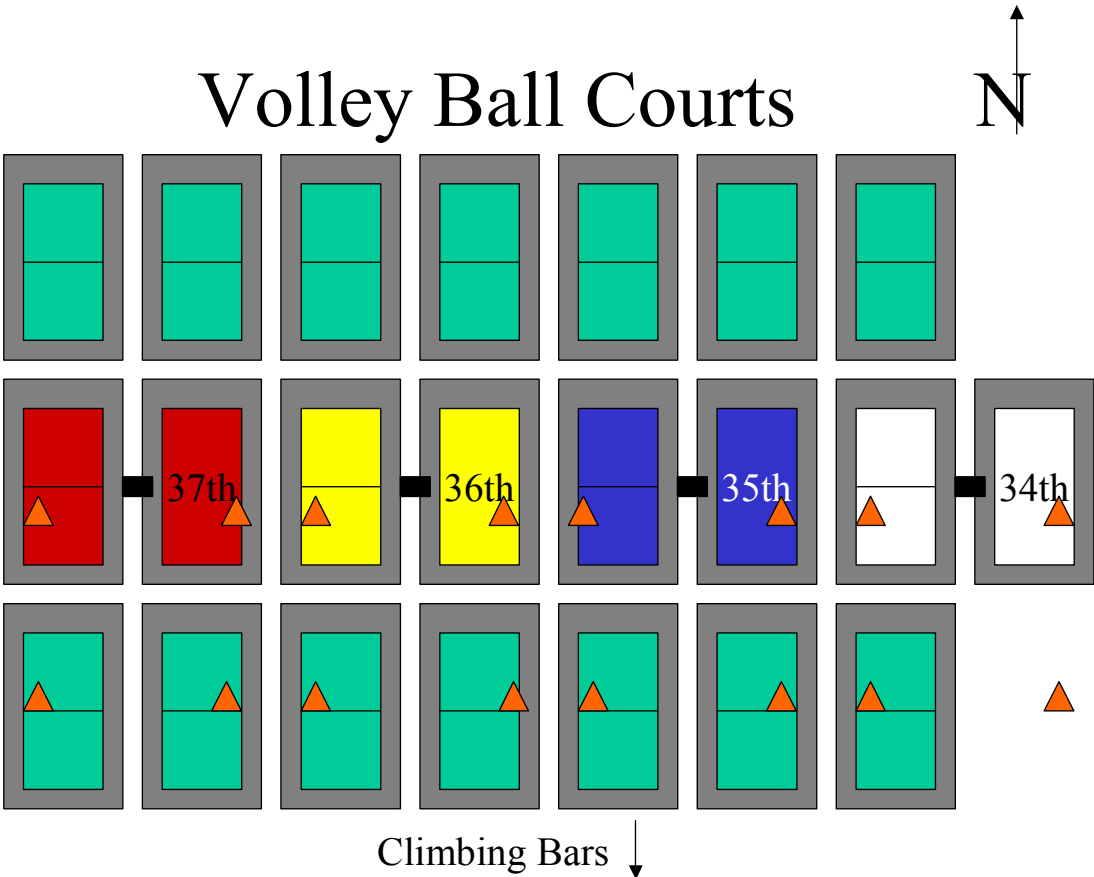
Position 2



Starting Position

Check Points:

- ☐ At the starting position, the arms are directed to the sides at 90-degrees to the trunk, the fingers and thumbs are extended and joined.
- ☐ In position 1, keep the right shoulder, arm, and hand on the ground.
- ☐ In position 2, keep the left shoulder, arm, and hand on the ground.



CALISTHENIC DRILL 1		CALISTHENIC DRILL 2	
1	The Bend and Reach	1	The Woodchopper
2	The Rear Lunge and Reach	2	The Mountain Climber
3	The High Jumper	3	The Squat Stepper
4	The Rower	4	The V-Up
5	The Power Squat	5	The Power Jump
6	The Windmill	6	The One-leg Push-up
7	The Forward Lunge and Reach	7	The Diagonal Lunge and Bend
8	The Prone Row	8	The Body Arch
9	The Bent Leg Body Twist	9	The Leg Tuck and Twist
10	The Almighty Push-Up	10	The 8-Count Push-Up
GUERRILLA DRILL 1		RECOVERY DRILL A	
1	Verticals	1	The Groin Stretch
2	Laterals	2	The Hamstring Stretch
3	Crossovers	3	The Calf Stretch
4	The Power Skip	4	The Thigh Stretch
5	The Shuttle Sprint	5	The Hip Stretch
CLIMBING DRILL 1		RECOVERY DRILL B	
1	The Straight-Arm Pull	1	The Overhead Arm Pull
2	The Heel Hook	2	The Turn and Reach
3	The Pull-Up	3	The Rear Lunge and Reach
4	The Leg Tuck	4	The Flex and Extend
5	The Alternating Grip Pull-Up	5	The Single Leg Over
CALISTHENIC DRILL 1		CALISTHENIC DRILL 2	
1	The Bend and Reach	1	The Woodchopper
2	The Rear Lunge and Reach	2	The Side Lunge and Reach
3	The High Jumper	3	The Double High Jumper
4	The Rower	4	The V-Up
5	The Power Squat	5	The Mountain Climber
6	The windmill	6	The Diagonal Lunge and Bend
7	The Forward Lunge and Reach	7	The Leaning Rest Rotation
8	The Prone Row	8	The Squat Stepper
9	The Bent Leg Body Twish	9	The Leg Tuck and Twist
10	The Almighty Push-Up	10	The One-Leg Push-Up
GUERRILLA DRILL 1		RECOVERY DRILL A	
1	Verticals	1	The Groin Stretch
2	Laterals	2	The Hamstring Stretch
3	Crossovers	3	The Calf Stretch
4	The Power Skip	4	The Thigh Stretch
5	The Shuttle Sprint	5	The Hip Stretch
CLIMBING DRILL 1		RECOVERY DRILL B	
1	The Straight Arm Pull	1	The Overhead Arm Pull
2	The Heel Hook	2	The Turn and Reach
3	The Pull-Up	3	The Rear Lunge and Reach

4	The Leg Tuck
5	The Alternating Grip Pull-Up

4	The Flex and Extend
5	The Single Leg Over

1
2
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1
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5

1
2 The Rear Lunge and Reach
3 The High Jumper
4 The Rower
5 The Power Squat
6 The Windmill
7 The Forward Lunge and Reach
8 The Power Squat
GUERRILLA DRILL 1
1 Verticals
2 Laterals
3 Crossovers
4 The Power Skip
CLIMBING DRILL 1
1 The Straight Arm Pull
2 The Heel Hook
3 The Pull-Up
4 The Leg Tuck
5 The Alternating Grip Pull-Up

1	
2 The Mountain Climber	
3 The Squat Stepper	
4 The V-Up	
5 The Power Jump	
6 The One-leg Push-up	
7 The Diagonal Lunge and Bend	
8 The Power Squat	
RECOVERY DRILL A	
1 The Groin Stretch	
2 The Hamstring Stretch	
3 The Calf Stretch	
4 The Thigh Stretch	
RECOVERY DRILL B	
1 The Overhead Arm Pull	
2 The Turn and Reach	
3 The Rear Lunge and Reach	
4 The Power Squat	